

IN THE CLAIMS:

Claims 2, 3, 7 and 8 have been canceled.

Claims 1 and 6 have been amended as follows:

1 1. (Twice Amended) A magnetic fluid bearing motor provided with a bearing assembly, the
2 bearing assembly comprising:

3 a shaft formed partly or wholly of a ferromagnetic substance;

4 a substantially solid porous sleeve faced to in parallel with the shaft with forming a bearing
5 portion with a minimum gap provided therebetween; and

6 magnetic fluid oil impregnated into the gap and the porous sleeve,

7 wherein a ferromagnetic substance included in the shaft is locally magnetized ~~in a direction~~
8 ~~parallel to the shaft~~ so as to create magnetic flux density gradient that is set at a maximum ~~on~~ along the
9 bearing surface portion of the porous sleeve and decreases gradually as it stays away therefrom,

10 wherein a boundary of a magnetization-varying portion of the shaft is aligned with a line of a
11 flow of the magnetic fluid oil occurring with rotary motion of the sleeve or the shaft, and

12 wherein the bearing portion has a groove for generating dynamic pressure formed on a surface
13 of the shaft or the sleeve, and a magnetization-varying portion is arranged in a position of the shaft that
14 corresponds to the groove.

1 6. (Twice Amended) A magnetic fluid bearing motor provided with a bearing assembly, the
2 bearing assembly comprising:

3 a substantially solid porous sleeve including a ferromagnetic material;

4 a shaft faced to in parallel with the sleeve with a bearing portion with a minimum gap provided
5 therebetween; and

6 magnetic fluid oil impregnated into the gap and the porous sleeve;

7 wherein a surface of the bearing portion of the sleeve is locally magnetized ~~in a direction~~
8 ~~parallel to the shaft~~ so as to create magnetic flux density gradient that is set at a maximum ~~on~~ along the
9 bearing ~~surface~~ portion of the porous sleeve and decreases gradually as it stays away therefrom,

10 wherein a boundary of a magnetization-varying portion remaining on the surface of the bearing
11 portion of the sleeve is aligned with a line of a flow of the magnetic fluid oil that occurs with rotary
12 motion of the sleeve or the shaft, and

13 wherein the bearing portion has a groove for generating dynamic pressure formed on a surface
14 of the shaft or the sleeve, and a magnetization-varying portion is arranged in a position of the surface of
15 the bearing portion of the sleeve that corresponds to the groove.